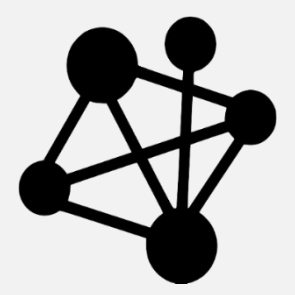


HIGHER EDUCATION STUDENTS TACKLING A SYNCHRONOUS ONLINE COLLABORATIVE WRITING TASK: EXPLORING THE RELATION BETWEEN WRITING PROCESS AND PRODUCT

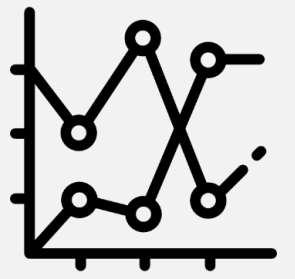
PhD-student: Nore De Grez, Promotor: Prof. dr. Bram De Wever

RESEARCH CONTEXT

Collaborative writing as a highly complex process



- Multiple roles, sub tasks, and activities which all can be performed interactively
- The way groups tackle this complex task differs, difficulty of developing truly collaborative writing
- Indications of relationship between the group strategy and the quality of final products and level of collaborative knowledge construction



- Previous individual writing research: relation between frequency and temporal distribution of (meta-)cognitive activities and text quality



- Possibilities of Computer Supported Collaborative Learning (CSCL) environments
- Increased interest in web 2.0. technology such as Google Doc and Etherpad which can support synchronous collaborative writing

→ Profound research on how higher education students tackle this kind of tasks and how this relates to outcomes is limited

AIMS

- 1) To enhance the understanding of the collaborative synchronous writing process
- 2) To explore the relation of these process features with the quality of the group product

METHOD



- 50 master students
- triads (N=17)



90 min



Synthesis based on 3 provides sources



Online editor Etherpad



- Reflection task
- Stimulated recall interview

Analysis

Quality of texts

- Holistic scoring procedure based on benchmarking
- 2 experts: 5 essays as benchmarks
- 2 trained, independent raters: mean of scores

Processes: online chat interactions

- Coding scheme
- 2 raters: discussed non-agreed codes until consensus reached
- Time aspect: temporal analysis (5 episodes)

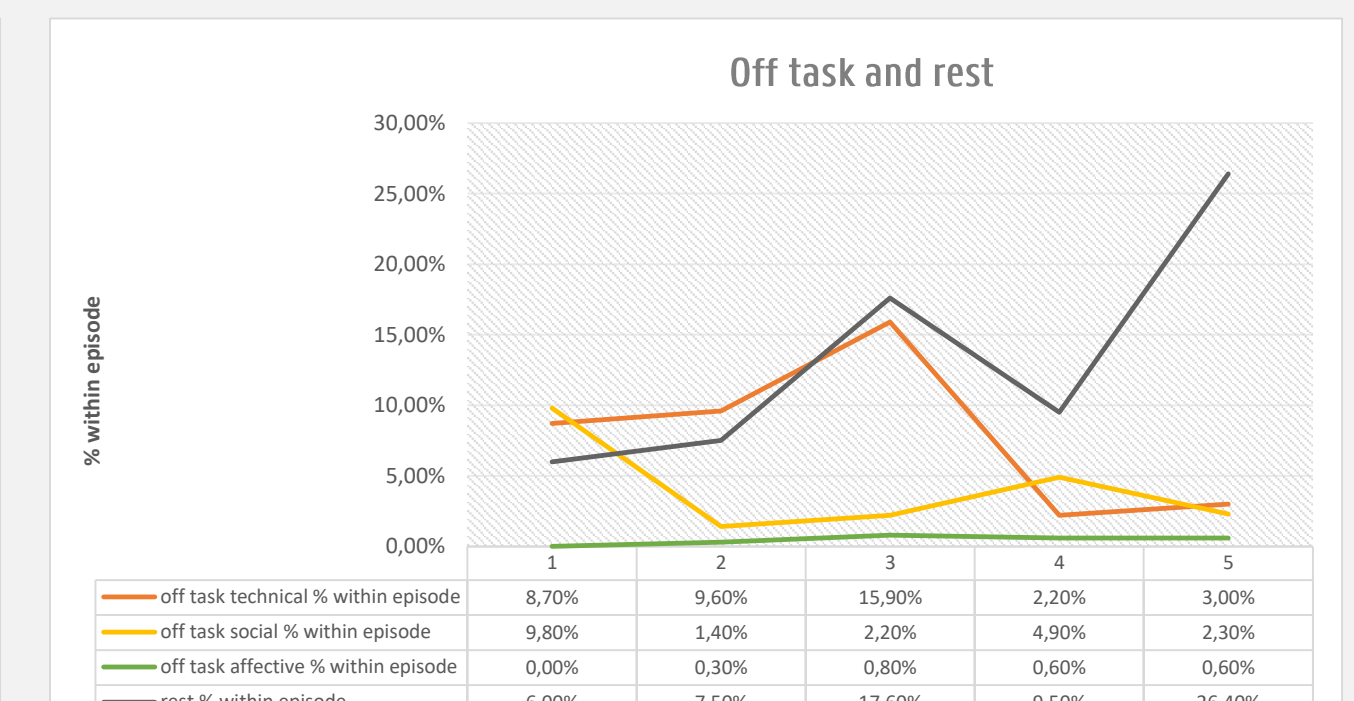
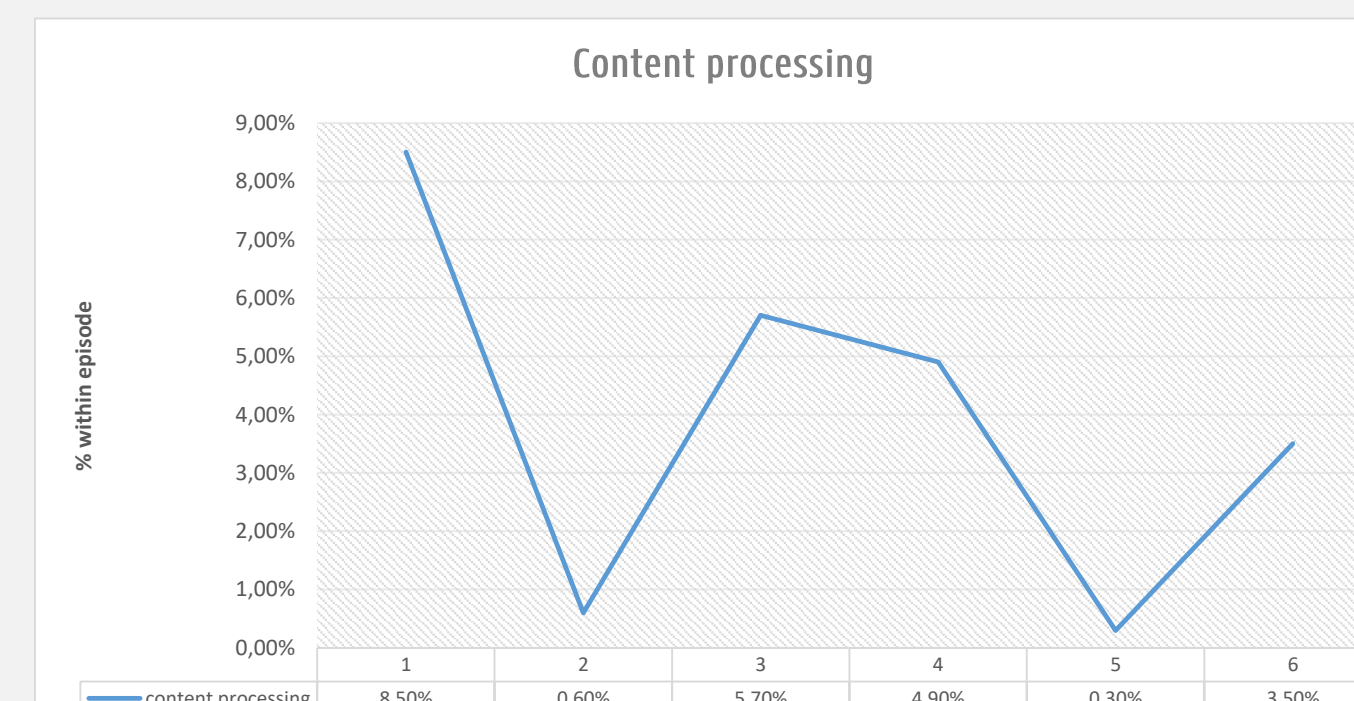
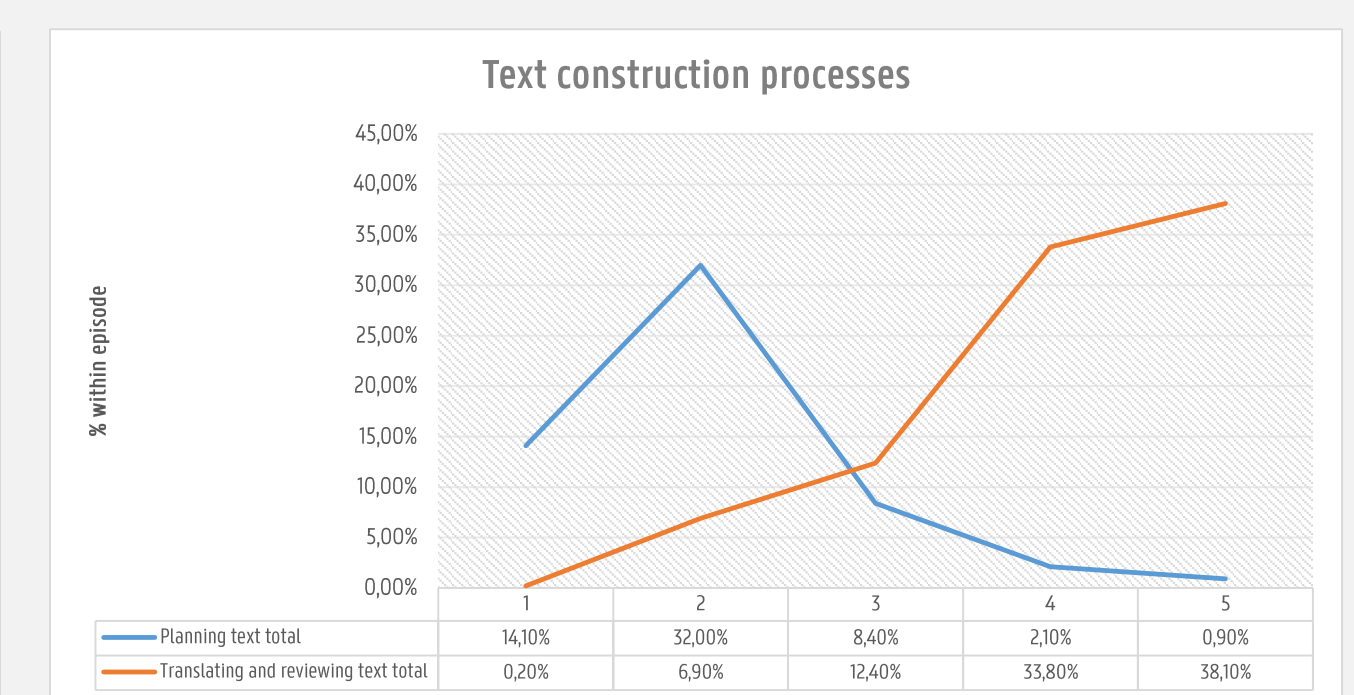
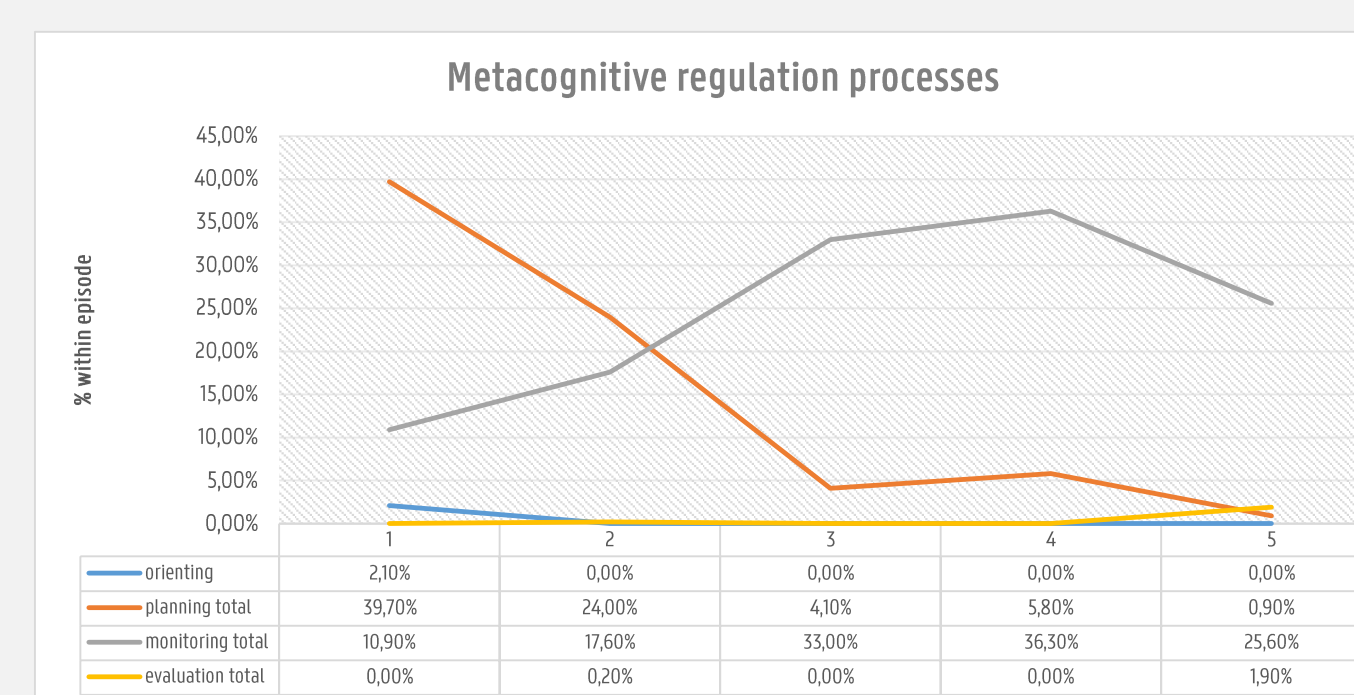


Text construction processes	<ul style="list-style-type: none"> ▪ Planning ▪ Translating and reviewing
Metacognitive regulation processes	<ul style="list-style-type: none"> ▪ Orienting ▪ Planning ▪ Monitoring ▪ Evaluation
Content processing	<ul style="list-style-type: none"> ▪ Low level ▪ High level
Off task	<ul style="list-style-type: none"> ▪ Technical ▪ Social ▪ Affective
Rest	
Level of transactivity of interactions (action - reaction)	<ul style="list-style-type: none"> ▪ Non-transactivity ▪ Low transactivity (representational) (hybrid transactivity) ▪ High transactivity (operational)

RESULTS: DESCRIPTIVES

	f	%
Text construction processes	982	31
planning text ideas	325	10,3
planning text organizing	16	0,5
reviewing structure	257	7,5
reviewing content	289	9,1
reviewing edit	115	3,6
Content processing	110	3,5
content low level	82	2,6
content high level	28	0,9
Metacognitive regulation processes	1236	39,1
orienting	12	0,4
planning task	420	13,3
planning review	14	0,4
monitoring progress	630	19,9
monitoring word count	119	3,8
monitoring comprehension	22	0,7
evaluation process	16	0,5
evaluation product	3	0,1
Off task	367	11,7
off task technical	230	7,3
off task social	122	3,9
off task affective	15	0,5
Rest	468	14,8
Total	3163	100

- Average 186 chat messages per group (SD=78.64, MIN=68, MAX=337)
- Distribution of types of chat interactions (n=3163) by category
- Average occurrence varies across time during task execution (5 episodes)
 - e.g. planning text vs. revising text
- Clear differences between groups
 - occurrence of processes (e.g. more of fewer planning task)
 - occurrence of processes per episode (e.g. only reviewing during last episode vs. during the whole task)

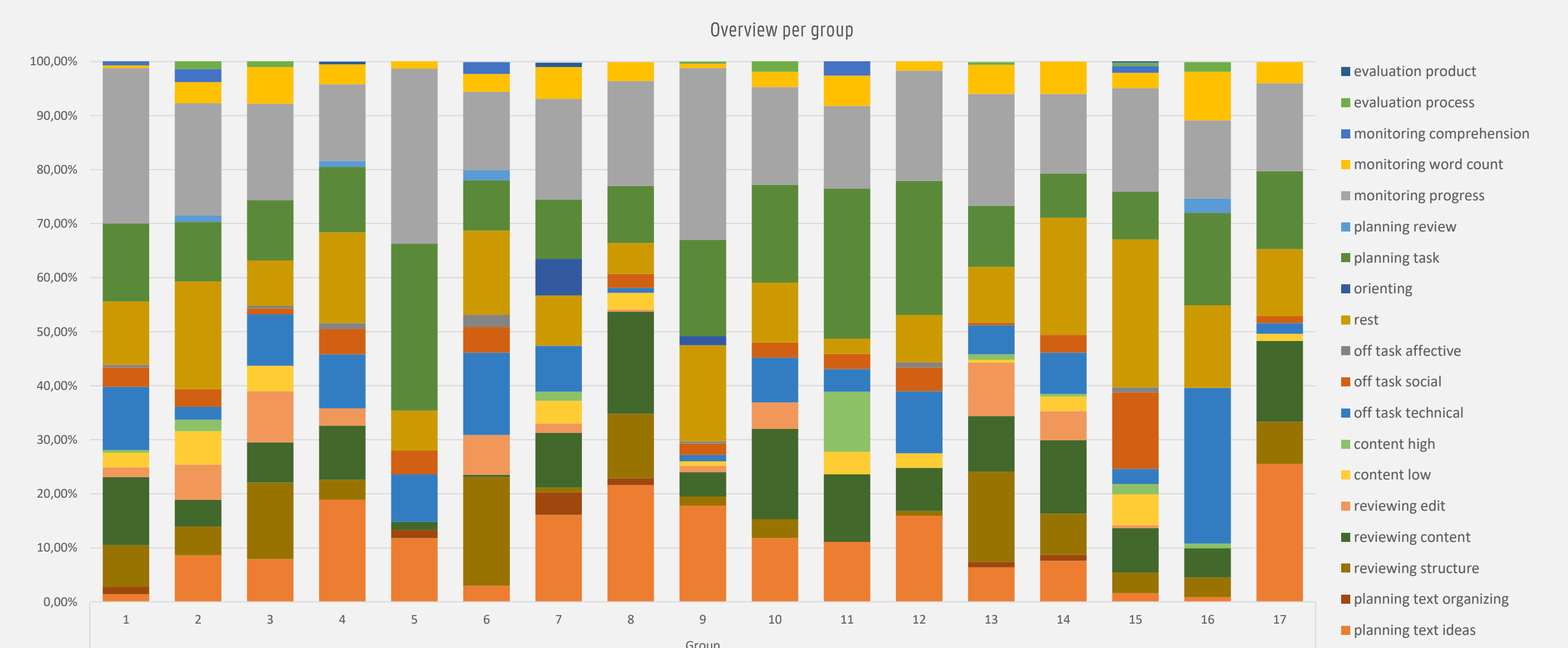


Limitations

- Black box: interactions and coordination within text editor
- Quality of writing processes?
- Equal engagement of group members?

Next steps

- Qualitative research: selection of cases
 - Combination of multiple data sources: chat interactions, observations Etherpad, reflection tasks, stimulated recall interviews
- Further analysis transactivity of interactions, relation to group products



QUESTIONS TO DISCUSS

- How can we explain the differences between the groups?
- How to ensure a valid product assessment?
- How can we connect the analysis of collaborative processes with individual characteristics?
-

References
 Berkowitz, M. W., Althoff, W., Turner, V. D., & Bloch, D. (2008). Discourse, development, and education. In F.K. Oser & W. Veugelers (Eds.), *Getting involved: Global citizenship development and sources of moral values* (pp. 189-201). Rotterdam: Sense Publishers
 De Backer, L., Van Keer, H., & Vaecke, M. (2015). Socially shared metacognitive regulation during reciprocal peer tutoring: Identifying its relationship with students' content processing and transactive discussions. *Instructional Science*, 43, 323-344. doi: 10.1007/s11251-014-9355-4
 Flower, L., & Hayes, J.R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32(4), 365-387. doi:10.2307/356600
 Lowry, P.B., Curtis, A., & Lowry, M.R. (2004). Building a Taxonomy and Nomenclature of Collaborative Writing to Improve Interdisciplinary Research and Practice. *International Journal of Business Communication*, 41(7), 66-99.
 Mayadunna, R. M., & Orzuaba, J. (2015). Work coordination and collaborative knowledge construction in a small group collaborative virtual task. *Internet and Higher Education*, 25, 96-104. doi:10.1016/j.iheduc.2015.02.005
 Nykopp, M., Marttunen, M., & Laurinen, L. (2014). University Students Knowledge Construction during Face to Face Collaborative Writing. In P. Klein, P. Boscolo, L. Kirpatrick, & C. Gelati (Eds.), *Writing as a Learning Activity* (pp. 277-299). Leiden: Brill.
 Orzuaba, J., & Engel, A. (2009). Strategies for collaborative writing and phases of knowledge construction in CSCL environments. *Computers and Education*, 53(4), 1256-1265.
 Tillema, M., van den Bergh, H., Rijlaarsdam, G., & Sanders, T. (2011). Relating self reports of writing behavior and online task execution using a temporal model. *Metacognition Learning*, 6, 229-251. doi: 10.1007/s11409-011-9072-x
 Volek, S., Summers, M., & Thurman, J. (2009). High-level co-regulation in collaborative learning: How does it emerge and how is it sustained? *Learning and Instruction*, 19, 128-143.
 Van den Bergh, H., & Rijlaarsdam, G. (2009). Changes in Cognitive Activities During the Writing Process and Relationships with Text Quality. *Educational Psychology*, 21(4), 375-385. doi: 10.1080/0144541020990777
 Van Steendam, E. (2016). Editorial Forms of Collaboration in Writing. *Journal of Writing Research*, 8(2), 183-204. doi:10.11723/jowr-2016.08.02.01